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Differences in Emotion Regulation in Students with Oral Test Anxiety

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Abstract

Oral exams are a threatening situation for students, and avoidance behaviours such as postponement and expression inhibition, are ways of coping with tests anxiety.

Objective: Present study aims to classify students into profiles based upon their levels of test anxiety and behavioural avoidance and explore differences in cognitive emotion-regulation strategies and skills across the profiles.

Method: A prospective post fact study was done. Participants (N=155) completed self-reports of test anxiety, behavioural avoidance in oral exams and emotion regulation strategies and difficulties, in an online survey. Latent class analysis identified four profiles of students combining levels of test anxiety, expression inhibition, and postponement.

Results: Multivariate analysis of variance indicated differences across groups in emotion regulation strategies with catastrophizing and rumination as the most employed in highly test anxious groups, and positive reappraisal in lowest test anxiety groups. In emotion regulation difficulties, the most distressed groups exhibited more deficits to control interference in goal-oriented behaviours, control impulses and emotion acceptance, compared with the remaining groups.

Conclusion: Results support hypothesized differences between high- and low-test anxious students in emotion regulation skills and promote the inclusion of emotion-regulation training in treatment of oral test anxiety.

Keywords: Emotion Regulation, Test Anxiety, Behavioural Avoidance, Oral Exams, University Students

Introduction

In academic tests, learners experience emotions such as hope, happiness, relief, fear, anxiety, anger, shame or feelings of self-blame (Pekrun & Perry, 2014). Test anxiety defines a disposition to react with increased anxiety in the face of performance-related contexts, and worry about failure and its consequences to academic self-concept are their core cognitions. Worry usually promotes activation of coping in stressful transactions and self-regulation learning, but when the arousal and the cognitive interference are high, erodes performance and their accomplishments with intense suffering (Cassady, 2004; Zeidner & Mattews, 2005).

Test anxiety is related with surface-information processing and mnemonic strategies for studying (Naveh-Benjamin, 1991), perfectionism (Lowe, 2022), procrastination, mental symptoms, susceptibility to cognitive interference, task avoidance, failure acceptance, and disengaged coping strategies (Furlan et al, 2014). Relatedly, test anxiety´s typical outcomes are decreased academic performance (Cassady & Johnson, 2002), academic delay and low satisfaction (Putwain et al., 2021)

Transactional model (Spielberger & Vagg, 1995) suggests that test anxiety is a specific trait associated with positive and negative emotional states across the exam phases (i.e., preparation, confrontation, after exam). State emotions in test results of evaluative processes, in which interacts test anxiety-trait and situational factors. In university, oral tests are commonly, and have characteristics that increase threat appraisals because includes academic and social challenges (Ringeisen & Buchwald, 2010).

Oral test anxiety includes concerns about evaluative relationship, the quality itself of oral expression, and observable symptoms of nervousness. In oral exams, there is an explicit self-monitoring of verbal (i.e., stuttering, pace) and non-verbal (i.e., body movement, rush) response. Social and emotion regulation skills are necessaries to maintain a positive interaction with teachers and to cope with evaluative stress (Furlan et al., 2019).

Test-anxious students are a heterogeneous group, thus a classification of profiles considering these differences may help to tailor interventions. For instance, Zeidner (1998) proposed a classification considering motivational tendencies, related personality traits and learning strategies. He included learners with (a) study skills deficits, (b) anxiety blockage and retrieval failure, (c) failure acceptance, (d) failure avoidance, (e) self-handicapping, and (f) perfectionism. Empirical support for some classes was found, like students with study skills deficits (Naveh-Benjamin, 1991), anxiety blockage (Ramirez & Beilock, 2011) or perfectionism (Arana & Furlan, 2016).

Recent attempts of classification, used latent classes analysis, a widely used technique used to find groups or subtypes of cases in multivariate categorical data (Magidson et al., 2020), and identified three profiles of test-anxiety levels (i.e., low, medium, high). In

particular, the high test-anxiety group exhibit high levels of self-criticism and rigid perfectionism (Lowe, 2022). Another approach using latent classes' profiles and clusters analysis made by Thomas and colleagues (2018) reaching a comparable configuration. They identified the three aforementioned levels, with the highest associated with cognitive obstruction, social derogation and psychological tenseness. Similarly, Escolar-Llamazares and Serrano-Pintado (2014) identified two groups of test-anxious students with enough or poorer test-taking skills. The first ones not compromising performance but suffering from stress during test-situation and the second have poorer test performance because not been well prepared. Possibly one of the most neglected features in the empirical and theoretical classification of test-anxious students are the behavioral expressions of test anxiety. Recently, Furlan and Sánchez-Rosas, (2018) distinguished two types of avoidance, labeled postponement (i.e., delay of test taking in the pre-exam phase) and expression inhibition (i.e., increasing emotionality and cognitive interference during test).

Both behaviors attempts to regulate negative emotions in oral exams, and in the short term, postponement reduces test anxiety but at the cost of feelings of anger toward the self or self-guilt, and in long term, the career advance delays, thus lastly employing more time and effort. Expression inhibition, reduce exhibit incompetence, and similar to blockage, attempts to cope with threat perception by stopping exposure to evaluative situations (Furlan & Sánchez-Rosas, 2018).

Emotion regulation refers to personal attempts to modify the occurrence, intensity or duration of emotional states, altering some antecedents, or aspects of emotional response itself, to collaborate in maintaining goal - directed behavior (Gross, 2007). Strategy of cognitive reappraisal refers to change the perception and assessment of emotional events and emotional consequences, and correlates with increased wellbeing and decreased negative affect. Expressive suppression consists of attempts to inhibit or reduce ongoing emotion-expressive behavior and is associated with reduced positive affect and high emotional distress (Gross, 2007).

Other classification (Flores-Kanter et al, 2019, Garnefsky & Kraaij, 2006) distinguish a set of cognitive emotion regulation strategies, with four labeled as implicit or automatic, which relates with increased distress. Rumination, consisting of thinking recurrently about the event and its possible causes and consequences; catastrophizing, implies the increase of the sense of severity of the potential damage/threat associated with the event; self-blame, means to attach the causes of adverse events to one's own behavior; and blame to others, is the attempt to externalize responsibility in provoking the adverse event.

Another strategies labeled explicit/controlled, are associated with emotional wellbeing. They includes things into perspective, consist in thinking about the event in a wider context to assess their importance in relation to other event. Acceptance that involves

thinking about the fact as not modifiable, and then ceases to attempts to change it. Focalizing on positive is to think in other events as a type of distraction. Positive reappraisal, consist on thinking about the negative event in terms of useful learning. Finally, focalizing on plans is to direct the thinking and behavior to modify the negative aspects of the situation.

An emotion regulation skills perspective (Gratz and Roemer, 2004) distinguish emotional awareness, emotional clarity, emotional acceptance, impulse control, engaging in goal-directed behavior while experiencing negative emotions, and using situational appropriate emotion regulation strategies. Deficits in these skills correlates with psychopathology and emotional disturbance (Medrano et al, 2013)

Self-referent executive processing model of test anxiety (S-REF; Zeidner & Mattews, 2005) claims that interactions of executive self-regulation processes, self-beliefs, and maladaptive situational interactions, could explain origins and maintenance of test anxiety responses. Specifically, regulating test anxiety includes appraisal significance of the situation, implications of failure, planning for coping, and metacognitive beliefs about worry. Choosing counterproductive strategies (e.g., rumination, avoidance, or self-blame) increases test´ worries, and metacognitive beliefs about worry as dangerous (Putwain, 2019).

Kamel (2018) found positive and moderate relationships between test anxiety and strategies of self-blame, blaming others, rumination and catastrophizing, and a moderate and negative correlation with acceptance, refocus on planning, positive refocusing, positive reappraisal, and putting into perspective.

Relative to deficits in emotion regulation, Hartman, et al (2017) found that non-acceptance of emotional responses, difficulties engaging in goal-directed behavior, impulse control, access to emotion regulation strategies, were principal predictors of test anxiety.

Present study aims to find empirical classes of students with oral test anxiety and behavioral avoidance. Profiles hypothesized are: a) higher test anxiety, inhibition and postponement (i.e. pathological group); b) higher test anxiety and postponement, and low inhibition (i.e. avoidant group); c) higher test anxiety and inhibition, and low postponement (i.e. inhibited group); d) lower test anxiety, inhibition and postponement (i.e., healthier group). Additionally, explore whether differences exist across profiles in emotion regulation deficits and cognitive strategies deployed.

If found empiric support for profiles, expect some differences in emotion regulation across the groups. Specifically, expect that more adaptive strategies (reinterpretation, acceptance, focalizing in positive and plans) being more frequent in the healthier group, and conversely, less adaptive strategies (self-blame, blame the others, catastrophizing and

rumination) being more frequent in higher test anxiety profiles. Additionally, expect more deficits in emotion regulation skills in higher test-anxious students, especially in the high inhibition and postponement class.

Methods

A non-probabilistic self-selected sample was employed (Sterba & Foster, 2008) with 155 students of Medicine (30 %), Psychology (53 %) and Systems Engineering (17 %) of National and Technological Universities of Cordoba, Argentina.

Cognitive Emotion Regulation Questionnaire (CERQ, Garnefski & Kraaij, 2006). This self-report has 36 items ranging from 1 (never) to 5 (almost ever) and examines nine emotion regulation strategies that persons use after a traumatic or unpleasant experience. Argentinian version of CERQ obtained support for a nine-factor structure (four items scales) and acceptable levels of internal consistency (Medrano et al., 2013). In the current study were: α= .79, ω = .80 for Catastrophizing, α= .76, ω = .76 for Rumination, α= .79, ω = .80 for Self-blame, α= .72, ω = .78 for Blame to others, α= .64, ω = .70 for Acceptance, α= .86, ω = .87 for Focalizing on Positive, α= .70, ω = .73 for Focalizing on plans, α= .81, ω = .81 for Put into Perspective, and α= .82, ω = .82 for Positive Reappraisal.

Difficulties in Emotion Regulation Scale (DERS, Gratz & Roemer, 2004). The current scale has 36 items with a Likert-scale range (1 = never to 5 = almost ever) and a six-factor structure: Lack of Emotional Awareness, Lack of Emotional Clarity, Non-acceptance of Emotional Responses, Difficulties Engaging in Goal-directed Behavior, Impulse Control Difficulties and Limited Access to Emotion Regulation Strategies. The Argentinian version with re-analyzed internal structure, conserving only four of the six original scales (Medrano & Trógolo, 2016). In present work, reliabilities were α= .85, ω = .87 for Impulse Control Difficulties, α= .82, ω = .82 for Lack of Emotional Clarity, α= .86, ω = .86 for Difficulties Engaging in Goal-directed Behavior, and α= .88, ω = .88 for Non-acceptance of Emotional Responses.

German Test Anxiety Inventory (TAI-G, Hodapp, 1995). It is a 29-item self-report instrument (α=.90) which assesses four dimensions of anxiety about exams: Worry, Interference, Emotionality and Lack of confidence. Likert scale of five responses was used, from 1 (never) to 5 (always). Argentinian version (GTAI-AR, Piemontesi, et al, 2012) presents internal structure validated through confirmatory factor analysis, with good fit indexes for four-dimensional and a second order factor model, the only employed in present study, with a reliability similar to the previous local adaptation (α= .94, ω = .94).

Behavioral Avoidance in Oral Exams Scale (Furlan & Sánchez Rosas, 2018). Self-report with 14 items developed to assess two avoidance behaviors, Postponement (α = 91) and

Expression Inhibition (α = 89). Likert scale of five responses was used with 1 (never) to 5 (always). Internal structure, validated through confirmatory factor analysis, obtain good fit indexes for bi-dimensional model. Reliability in our current study was similar to the original scale development (Postponement, α= .91, ω = .91; Expression Inhibition, α= .89, ω = .90).

A prospective post fact study was conducted (Montero & León, 2007) with the instruments administered through an online survey (Limesurvey, Pérez, 2007). Participants gave accomplishment after informed of goals and characteristics of the study. Perform Latent profile analyses with the package tidy LPA (Rosenberg et al., 2019) under the R environment (R Core Team, 2018) and MANOVAs with Social Science Statistical Package (SPSS, IBM, 2013).

Materials and methods should be written in sufficient detail that the work can be repeated by another competent researcher, should be presented in a logical order, should be divided by topical subheadings, and should contain an ethics statement if applicable. Include a dedicated section to describe statistical analyses if applicable. For novel methodologies and protocols, thorough descriptions are necessary, whereas established methods can be summarized with proper citation. Manuscripts reporting extensive datasets deposited in public databases should specify the data's location and relevant accession numbers. If these numbers are unavailable at submission, mention that they will be provided during review but must be included before publication. Studies involving interventions on animals or humans, as well as those requiring ethical approval, should include the approving authority and the corresponding ethical approval code.

Results

Although there is a considerable variability in model selection in terms of how constrained or unconstrained the parameters could estimate, we opt for a more conservative approach, mimicking the Mplus commercial software default model with an open source R package (i.e., tidylpa). This approach is the simplest model and involves constrained variances to equality and fixed covariances to zero. Several research involving latent profile analysis and test anxiety uses the Mplus default model (e.g., Journault et al., 2022; Möcklinghoff et al., 2021; von der Embse et al., 2014). We also employed the use of 100 random sets of starting values to avoid convergence problems and local maxima problems). Although the best statistical solution was a five-class option, their lack of theoretical basis as well as a p-value trend to non-significance in the Bootstrapped Likelihood Ratio Test (i.e., $p < .02$) moved us to consider a four-class solution. Indeed, the four-class solution also has the better fit indices in terms of BIC, ICL and CAIC (See Table 1 for values).

Table 1 Fit indices for one- to six-class model

Model	AIC	BIC	ICL	CAIC	Entropy	BLRT	BLRT p-value
One-class	1237	1255	-1255	1261	1	na	Na
Two-class	1111	1142	-1168	1152	0,762	134	,0099
Three-class	1086	1128	-1177	1142	0,724	33,7	,0099
Four-class	1061	1116	-1167	1134	0,771	32,0	,0099
Five-class	1052	1119	-1170	1141	0,783	17,1	,0198
Six-class	1045	1124	-1171	1150	0,818	15,3	,0495

Note: AIC: Aikake information criterion; BIC: Bayesian information criterion; ICL: Integrated completed likelihood (Biernacki, Celeux, & Govaert, 2000); CAIC: Consistent Aikake information criterion; BLRT: bootstrapped likelihood test

A one-way ANOVA was then conducted to aid in the labeling of the aforementioned classes, obtaining significant differences ($p<.001$) in test anxiety, postponement and inhibition across the fourth classes. The first class was labeled "the pathological group", and included participants with the highest levels of test anxiety, inhibition and postponement (N=28). Presents severe difficulties to cope with test anxiety previously and during oral exams. The second, labeled "the avoidant group" corresponds to participants with comparable higher test anxiety and postponement but significantly lower inhibition in oral exams (N=41). This group of students postpones confrontation to oral exams as a way to deal with high pre-exam anxiety, but when confronted with the oral test, can do it well. The third, labeled "the inhibited group" included participants with comparable high levels of test anxiety and inhibition but significantly lower levels of postponement in oral exams (N=29). This group increases test anxiety during the exams and fails by blockage and other oral expression difficulties. The fourth, labeled "the healthier group" includes participants with lower levels of these three features (N=57), and can cope with test anxiety across the learning testing cycle and adequate confronted with oral exams. A MANOVA was conducted to test multivariate effects of emotion regulation strategies across the different profiles of test anxiety and the effect was statistically significant [Wilk´s Lambda = .650, $F=2.463$, $p < .0001$, η^2p.134]. Nevertheless, not all variables exhibited significant differences among profiles. Between-subjects tests showed statistically significant differences (see table 2) for the following strategies: Rumination ($p < .001$), Catastrophization ($p < .001$), and Reinterpretation ($p < .001$). Specifically, analyzing post hoc contrast (Games-Howell) can observe levels of Rumination are lower in healthier groups to the reminders, and in avoidant groups are lower than pathological ones, but similar to inhibited. In Catastrophizing, the healthier group scores are lower in comparison with the three remaining classes, who did not show differences between each of them. In Reinterpretation, the scores of the healthier group only were significantly lower than in the pathological group. Remaining emotion-regulation strategies differences among classes were not significant.With respect to difficulties in emotion regulation across profiles, another MANOVA test was performed

with a significant multivariate effect [Wilk´s Lambda = .767, F=3.451, p < .0001, η²p.08]. As theoretically expected, the healthier class showed lowest levels of Impulse Control Difficulties (p < .001), Interference with Goal-oriented Behaviors (p < .001) and Lack of Emotional Acceptance (p < .01). In the Lack of Emotional Clarity, the differences were not significant.

Table 2. Differences across the four classes in emotion regulation strategies. Descriptive statistics, results of ANOVAs, and post hoc comparisons. .

	Latent Classes					
Emotion regulation Strategies	Class 1 "Pathological" (N= 28) *M* *SD*	Class 2 "Avoidant (N= 41) *M* *SD*	Class 3 "Inhibited" (N= 29) *M* *SD*	Class 4 "Healthier" (N=57) *M* *SD*	ANOVA F (3,151) η²p	Post hoc comparisons
Blame others	8.60 3.10	7.56 2.75	7.72 2.96	7.77 2.89	.80 .06	-
Self-blame	15.32 3.82	14.88 3.70	14.31 3.49	13.84 2.47	1.55. .03	-
Rumination	22.71 4.36	19.58 4.72	19.83 5.30	16.84 4.39	**10.47*** .17**	**1,2>4; 1>2**
Catastrophizing	8.53 2.94	6.88 2.47	7.48 2.40	5.33 2.10	**12.49*** .20**	**1,2.3> 4**
Acceptance	11.71 2.14	11.27 2.61	11.20 2.29	11.93 2.43	.89 .02	-
Put into perspective	13.61 3.93	13.19 3.49	13.55 4.78	13.67 3.91	.12 .00	-
Reappraisal	12.86 4.34	14.49 3.03	13.96 3.30	15.83 3.19	**5.29** .09**	**4>1**
Focalizing on plans	16.93 2.76	16.41 2.60	15.79 3.32	17.12 2.31	1.78 .03	-
Focalizing on positive	10.07 4.27	10.73 3.90	9.72 3.29	10.59 3.80	1.14 .02	-

Note: N=155; F= f; *p*= significance level *** p<.001, ** p<.01, * p<.05 df= degrees of freedom; η²p= partial eta.

Lastly, differences regarding Lack of Emotional Acceptance (p < .01) were found only in the opposite extreme groups. Between inhibited and avoidant we did not find significant differences in emotion regulation deficits.

Table 3. Differences across the four classes in emotion regulation deficits. Descriptive statistics, results of ANOVAs, and post hoc comparisons.

	Latent Classes					
Emotion regulation deficits	Class 1 "Pathological" (N= 28)	Class 2 "Avoidant (N= 41)	Class 3 "Inhibited" (N= 29)	Class 4 "Healthier" (N=57)	ANOVA	Post hoc comparisons
	M *SD*	*M* *SD*	*M* *SD*	*M* *SD*	F (3,151) η^2p	
Lack of emotional acceptance	17.86 7.88	14.93 5.77	14.86 5.64	12.12 5.11	**6.07 ** .11**	**1>4**
Low emotional clarity	11.14 4.05	10.56 3.75	9.45 2.97	8.01 2.47	**3.85* .07**	-
Low impulse control	17.64 10.37	15.80 5.67	14.27 5.30	11.86 4.81	**8.38*** .14**	**1,2>4**
Interference in goal directed behavior	19.53 5.05	17.12 5.44	17.24 3.99	13.77 5.20	**9.31*** .16**	**1,2,3>4**

Note: N=155; F= f; *p*= significance level *** p<.001, ** p<.01, * p<.05 df= degrees of freedom; η^2p= partial eta.

Discussion

Present research aimed to establish profiles of test-anxious students considering two ways of behavioral avoidance in oral exams: postponement and expression inhibition, and as expected, results support a four-class solution. One was composed of students with higher levels of test anxiety, inhibition and postponement, representing the unhealthier group. This student needs many attempts to go and take the oral test, and when do it, perform deficient in relation to the time spent in preparing, by effect of anxiety blockage and expression inhibition (Furlan, 2021).

Second group includes students of higher test anxiety and postponement but low expression inhibition. They delay test taking, probably because self-evaluate their exam preparation as lower to their personal standards, needing many attempts to feel secure, and, when finally take the exam have a good performance, maintaining high as usual their level of excel achievement. This type could be the overstriking or perfectionistic test-anxious (Zeidner; 1998).

Third group includes those students with higher test anxiety and expression inhibition and low postponement. They reach the confrontation phase in oral exams but cannot regulate their emotional states and thus decrease performance, similar to the unhealthier group. (Ramirez & Beilock, 2011).

Latest class, lower in test anxiety and two avoidance behaviors, represents the healthier one, containing students for which test taking is not a harmful event.

Related to the second aim of this study, results indicate that the use of cognitive emotion regulation strategies in stressful events vary across classes, but the differences are statistically significant only to someone's.

Specifically, the unhealthy groups present higher rumination and catastrophizing in response to stressful events compared with other groups, as expected (Kamel, 2018; Liu et al, 2021; Piemontesi et al., 2012). Differences in self-blame are not significant, and a possible explanation to inhibition expression is that blockage experience is an uncontrollable reaction in which the student has no responsibility. In cases of postponing, because emotional pre-exam anxiety could not be coped, probably reframed as strategic delay to avoid a failure, a thinking used to protect self-esteem in self-handicappers (Zeidner, 1998).

In blaming to others, not group differences can attribute to consider test anxiety as an internalizing disorder, more frequently associated to shame, guilt or sadness, and not to anger.

Respect to controlled strategies, there were differences only in reinterpretation, especially in healthier groups compared to unhealthier ones. Reinterpretation could be useful to cope with worry about failure, decreasing catastrophizing appraisals (Piemontesi et al., 2012).

Differences in other strategies were not significantly, contrary to expected. Probably, controlled strategies are more available after exams, with results obtained and stress decreased. In preparation and confrontation phases, uncertainty is high and need taking decisions in accurate times under pressure. We must establish the plausibility of explanations in future inquires.

Finally, not found differences in emotion regulation strategies when comparing avoidant with inhibited groups. Predominance of one or other symptoms can be explained through factors not included (e.g. social skills, perfectionism, social anxiety or academic self-efficacy).

As expected, low test-anxious students were more able to control impulses and interference with goal-oriented behaviors. Those abilities collaborate to maintain test-relevant behavior when negative emotions increase, and being able to accept it, as a part of healthy test experience.

Related to emotional processes we found differences regarding lack of emotional acceptance only in the opposite extreme groups. Postponing is probably effective in short time when people have low emotion acceptance. Test taking includes some emotional activation, and accept it, collaborates to focus attention on test relevant behaviors.

In emotion clarity, not found differences and a probable explanation is that test anxiety has high prevalence in student´s population, and its symptoms are well known and recognized.

Cross-sectional design is not able to understand the complexity of the regulation process across the learning-testing cycle, with successive events to cope. Emotional states are arise in phases of preparation to and confrontation with evaluative events, and students do multiple emotion regulation attempts in short-time periods. Using self-reports of emotion regulation strategies and deficits, as typical behavior constructs, not can identify changes in emotion regulation strategies across phases. Repeated measures or narrative register could be useful to assess the diversity of strategies used, in their specific contexts, more accurately.

Additionally, self-reports cover only some dimensions of the variables. Other regulation strategies, (e.g. relaxation, self-instructions, religion, imagining a calm stimulus or help seeking) were not included in the measure chosen.

Sample's size (N=151) was able to conduct data analysis, nevertheless, improving number of cases is necessary to asses invariance across gender of fourth group hypothesized.

Respecting the strategy selected for data analysis, found some effects in line with predictions based on theory. Nevertheless, can run other analysis, using structural equation modeling to include emotion regulation moderation in the relation test anxiety - behavioral avoidance. Lastly, including post exam phase must be necessary to comprehension of emotion regulation process, because appraisals of outcomes is key to explain how to cope upcoming events.

Conclusion

Reducing oral test anxiety and avoidance is a challenge in which new evidence-based intervention programs should focus. Understanding profiles and identifying its prevalent emotion regulation strategies and difficulties help to select techniques including in interventions that increase coping abilities to confrontation with oral exams.

When postponing is the response to emotional disturbance in the pre-exam phase, the first is to be able to take a test again, improving skills to manage impulses and maintain goals-oriented behaviors. With inhibition expression, the intervention aims to increase social

test taking and emotion regulation skills, to perform when anxiety increase (Furlan et al, 2019).

Findings suggest the importance of techniques to tackle catastrophizing thinking, as cognitive restructuring, promoting evidence based analysis of contingencies in present and future events (Akinsola & Dubem-Nwajei, 2013; Motevalli et al., 2020) or mindfulness, if content of thinking is not the focus (King & Fresco, 2019).

For reducing rumination, can employ stop-thinking or mindfulness strategies as de-fusion (Aydin and Aydin, 2020). Positive reinterpretation must be a flexible way of thinking to help coping with non-expected failures or difficulties in test taking, emphasizing on learning and personal growth. This cognitive strategy, as others, as acceptance or put in perspective contributes to processing negative emotions associated with adverse events in a healthy way (Putwain & von der Embse, 2021).

Psycho-education and experiential techniques, should contribute to improve self-awareness of emotional responses (Kamel, 2018), to understand the meaning and function of each emotional response in relation to the task at hand, and how own thinking's and behaviors affects the intensity, course and effects of emotion in achievement situations (Amin Taghipour, 2020; Furlan et al, 2019).Present article contributes to the field of counselling and psychotherapy by providing empirical support to emotion regulation role in generating and maintaining test anxious disorders in oral exams. By identifying emotion regulation strategies and deficits related to hight oral test anxiety and avoidance behaviours, orient counsellors to build preventive and therapeutic interventions to university students, supported on empirical evidence. Specific resources were provided, as strategies to tackle emotion regulation deficits, that can be included in psychoeducational intervention programs.

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Akinsola, E., & Nwajei, A. (2013). Test Anxiety, Depression and Academic Performance: Assessment and Management Using Relaxation and Cognitive Restructuring Techniques. Psychology, 4, 18-24. https://doi.org/10.4236/psych.2013.46A1003

Amin Taghipour, S. R. (2020). The Effectiveness of Emotion Regulatory Training on Test Anxiety and Processing Efficiency of High School Girl Students. International Journal of Neurologic Physical Therapy, 6(2), 17-22. https://doi.org/10.11648/j.ijnpt.20200602.11

Arana, F. G., & Furlan, L. (2016). Groups of perfectionists, test anxiety, and pre-exam coping in Argentine students. Personality and Individual Differences, 90, 169–173. https://doi.org/10.1016/j.paid.2015.11.001

Aydın, Y., & Aydın, G. (2020). Acceptance and commitment therapy based psychoeducation group for test anxiety: A case study of senior high school students. Pamukkale University Journal of Education, 50, 180-200.doi: 10.9779/pauefd.584565

Biernacki, C., Celeux, G., & Govaert, G. (2000). Assessing a mixture model for clustering with the integrated completed likelihood. IEEE Transactions on Pattern Analysis and Machine Intelligence, 22(7), 719–725. https://doi.org/10.1109/34.865189

Campbell-Sills, L., & Barlow, D. H. (2007). Incorporating Emotion Regulation into Conceptualizations and Treatments of Anxiety and Mood Disorders. In J. J. Gross (Ed.), Handbook of emotion regulation (pp. 542–559). The Guilford Press.

Cassady J. C. (2004). The influence of cognitive test anxiety across the learning–testing cycle. Learning and Instruction, 14, 569-592. https://doi.org/10.1016/j.learninstruc.2004.09.002

Cassady, J. C., & Johnson, R. E. (2002). Cognitive test anxiety, procrastination, and academic performance. Contemporary Educational Psychology, 27, 270-295. https://doi.org/10.1006/ceps.2001.1094

Escolar - Llamazares, M.C. y Serrano-Pintado, I (2014) Definición del constructo Ansiedad ante los Exámenes en estudiantes universitarios. Ansiedad y Estrés, 20, (2-3), 165-180

Flores-Kanter, P. E., García-Batista, Z. E., Moretti, L. S., & Medrano, L. A. (2019). Towards an explanatory model of suicidal ideation: The effects of cognitive emotional regulation strategies, affectivity and hopelessness. The Spanish Journal of Psychology, 22. e43. https://doi.org/10.1017/sjp.2019.45

Furlan, L.; Ferrero, M.J. & Gallart, G. (2014). Ansiedad frente a los exámenes, procrastinación y síntomas mentales en estudiantes de la Universidad Nacional de Córdoba. Revista Argentina de Ciencias del Comportamiento, 6 (3) 3139.

Furlan, L., & Sánchez-Rosas, J. (2018). Evidencias de validez y confiabilidad de una Escala de Evitación Conductual en Exámenes Orales en estudiantes universitarios. Ansiedad y Estrés, 24(2-3), 90–98. https://doi.org/10.1016/j.anyes.2018.05.001

Furlan, L., Alonso - Crespo, A., Costantini, N., Díaz-Gutiérrez, M., & Yaryura, G. (2019). Tratamiento Grupal para la Ansiedad y la Evitación Conductual en Exámenes Orales. Revista de Psicoterapia, 30(113), 239-258. https://doi.org/10.33898/rdp.v30i113.272

Furlan, L. (2021). La ansiedad frente a los exámenes: perfiles, diagnóstico diferencial y estrategias para su abordaje en psicoterapia. Enciclopedia Argentina de Salud Mental.

Garnefski, N., & Kraaij, V. (2006). Cognitive Emotion Regulation Questionnaire — development of a short 18-item version (CERQ-short). Personality and Individual Differences, 41, 1045-1053. https://doi.org/10.1016/j.paid.2006.04.010

Gratz, K., & Roemer, L. (2004). Multidimensional assessment of emotion regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. Journal of Psychopathology and Behavioral Assessment, 26(1), 41-54. https://doi.org/10.1023/b:joba.0000007455.08539.94

Gross, J. J. (Ed.). (2007). Handbook of emotion regulation. The Guilford Press.

Hartman, S. D., Wasieleski, D. T., & Whatley, M. A. (2017). Just breathe: the effects of emotional dysregulation and test anxiety on GPA. College Student Journal, 51(1), 142-150.

Hodapp, V. (1995). The TAI-G: A multidimensional approach to the assessment of test anxiety. In: Schwarzer, C. and Zeidner, M. (Eds.), Stress, Anxiety, and Coping in Academic Settings, (pp. 95-130). Francke, Tübingen.

IBM Corp. Released 2013. IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp.

Jacobs, S.E. (2013) Anxiety and Test Performance: an Emotion Regulation Perspective. Ph D. Dissertation. Stanford University. http://purl.stanford.edu/yc231tk2148

Journault, A. A., Plante, I., Charbonneau, S., Sauvageau, C., Longpré, C., Giguère, C. É., Labonté, C., Roger, K., Cernik, R., Chaffee, K. E., Dumont, L., Labelle, R., & Lupien, S. J. (2022). Using latent profile analysis to uncover the combined role of anxiety sensitivity and test anxiety in students' state anxiety. Frontiers in Psychology, 13, 1035494. https://doi.org/10.3389/fpsyg.2022.1035494

Kamel, O. M. (2018). The Relationship between Adaptive / Maladaptive Cognitive Emotion Regulation Strategies and Cognitive Test Anxiety among University Students. International Journal of Psycho-Educational Sciences 7, (1), 100-105

King, A.P., & Fresco, D.M. (2019). A neurobehavioral account for decentering as the salve for the distressed mind, Current Opinion in Psychology, (28), 285-293. https://doi.org/10.1016/j.copsyc.2019.02.009.

Liu, Y., Pan, H., Yang, R. et al. (2021). The relationship between test anxiety and emotion regulation: the mediating effect of psychological resilience. Annals of General Psychiatry 20, 40 https://doi.org/10.1186/s12991-021-00360-4

Lowe, P. A. (2022). Exploration of Test Anxiety Profiles in U.S. Undergraduate Students. Higher Education Studies, 12(4), 9. https://doi.org/10.5539/hes.v12n4p9

Magidson, J., Vermunt, J. K., & Madura, J. P. (2020). Latent class analysis. Thousand Oaks, CA, USA: SAGE Publications Limited.

Medrano, L. A., Moretti, L., Ortiz, A., & Pereno, G. (2013). Validación del Cuestionario de Regulación Emocional Cognitiva en Universitarios de Córdoba, Argentina. Psykhe (Santiago), 22(1), 83-96. https://doi.org/10.7764/psykhe.22.1.473

Medrano, L. A., & Trogolo, M. (2016). Construct Validity of the Difficulties in Emotion Regulation Scale: Further Evidence Using Confirmatory Factor Analytic Approach. Abnormal and Behavioural Psychology, 2(2). https://doi.org/10.4172/2472-0496.1000117

Möcklinghoff, S., Rapoport, O., Heckel, C., Messerschmidt-Grandi, C., & Ringeisen, T. (2021). Latent Profiles of Test Anxiety: Considering its Multi-Faceted Structure. International Journal of Educational Research, 110, 101882. https://doi.org/10.1016/j.ijer.2021.101882

Montero, I., & León, O. G. (2007). Guía para nombrar los estudios de investigación en Psicología. International Journal of Clinical and Health Psychology, 7(3), 847-862.

Motevalli, S.; Sahandri, M.; Hamzah, G., & Gholampour-Garmjani, M. (2020). New Cognitive Restructuring and Critical Thinking Intervention on Test Anxiety. International Research Journal of Education and Sciences (IRJES), 4(1), 7-14

Naveh-Benjamin, M. (1991). A comparison of Training Programs Intended for Different Types of Test Anxious Students: Further Support for an Information Processing Model. Journal of Educational Psychology, 83(1), 134-139. https://doi.org/10.1037//0022-0663.83.1.134

Pekrun, R., & Perry, R. P. (2014). Control-value theory of achievement emotions. In R. Pekrun & L. Linnenbrink-Garcia (Eds.), International Handbook of emotions in education (pp. 120-141). New York: Taylor & Francis.

Pérez, C. J. M. (2007). Manual de Usuario de la plataforma de encuestas en línea: Lime Survey, Versión 1.0, Licencia de Documentación Libre GNU.

Piemontesi, S., Heredia, D., & Furlan, L. (2012) Propiedades Psicométricas de la versión en español revisada del Inventario Alemán de Ansiedad ante Exámenes (GTAI-AR) en estudiantes argentinos. Universitas Psychologica, 11(1), 177-186. https://doi.org/10.11144/javeriana.upsy11-1.ppve

Piemontesi, S., Heredia, D., Furlan, L., Sánchez, J., & Martínez, M. (2012). Ansiedad ante los exámenes y estilos de afrontamiento ante el estrés académico en estudiantes universitarios. Anales de Psicología, 28 (1), 89-96.

Putwain, D.W. (2019). An examination of the self-referent executive processing model of test anxiety: control, emotional regulation, self-handicapping, and examination performance. European Journal of Psychology of Education, 34, 341-358. https://doi.org/10.1007/s10212-018-0383-z

Putwain, D. W., & von der Embse, N. P. (2021). Cognitive-behavioral intervention for test anxiety in adolescent students: do benefits extend to school-related wellbeing and clinical anxiety. Anxiety, stress, and coping, 34(1), 22–36. https://doi.org/10.1080/10615806.2020.1800656

Putwain, D. W., Stockinger, K., von der Embse, N. P., Suldo, S. M., & Daumiller, M. (2021). Test anxiety, anxiety disorders, and school-related wellbeing: Manifestations of the same or different constructs? Journal of school psychology, 88, 47–67. https://doi.org/10.1016/j.jsp.2021.08.001

R Core Team. (2018). R: A language and environment for statistical computing. Vienna, Austria: R Foundation for Statistical Computing. https://www.R-project.org/

Ringeisen, T.; & Buchwald, P. (2010) Test anxiety and positive and negative emotional states during an examination. Cognition, Brain, Behavior. An Interdisciplinary Journal, 14, 431-447

Rosenberg, J. M., Beymer, P. N., Anderson, D. J., Lissa, C., and Schmidt, J. A. (2019).

tidyLPA: an R package to easily carry out latent profile analysis (LPA) using open-source or commercial software. J. Open Source Softw. 3:978. https://doi.org/10.21105/joss.00978

Spielberger, C. D., & Vagg, P. R. (1995). Test Anxiety: a transactional process model, In Spielberger & Vagg (Eds). Test Anxiety: Theory, assessment and treatment. Washington: Taylor & Francis.

Sterba, S. K., & Foster, E. M. (2008). Self-selected sample. In P. J. Lavrakas (Ed.), Encyclopedia of Survey Research Methods (pp. 806-808). Thousand Oaks, California: SAGE Publications.

Thomas, C. L., Cassady, J. C., & Finch, W. H. (2017). Identifying Severity Standards on the Cognitive Test Anxiety Scale: Cut Score Determination Using Latent Class and Cluster Analysis. Journal of Psychoeducational Assessment, 36(5), 492–508. https://doi.org/10.1177/0734282916686004

von der Embse, N. P., Mata, A. D., Segool, N., & Scott, E.-C. (2014). Latent Profile Analyses of Test Anxiety: A Pilot Study. Journal of Psychoeducational Assessment, 32, 165-172. https://doi.org/10.1177/0734282913504541

Wong, S. S. (2008). The relations of cognitive triad, dysfunctional attitudes, automatic thoughts, and irrational beliefs with test anxiety. Current Psychology, 27(3), 177–191. https://doi.org/10.1007/s12144-008-9033-y

Zeidner, M. (1998). Test anxiety: The state of the art. Nueva York, NY: Plenum Press.

Zeidner, M., & Mathews, G. (2005). Evaluation anxiety. In the Handbook of competence and motivation, ed. A.J. Elliot and C.S. Dweck, 141–163. London: Guildford Press.